REMARKS

The Office Action of April 28, 2006 has been carefully studied. The claims in the case are now 1-14. No claim has yet to be allowed.

As for the amendments to the claims, it is seen that the catalyst of claim 1 now requires a specific surface of less than 150 m^2/g, support being the preferred surface area set forth on page 5, line 5 of the specification.

Claim 4 is also amended by requiring a specific surface area of not more than 130 m^2/g, support being found in the examples in Table 2 where the specific surface is 130 m^2/g and in Table 3 where the specific surface is 50 m^2/g.

Support for new claim 11 is found in Examples 3 and 4 wherein the catalyst comprises cobalt and molybdenum, and support for claim 12 is found in Example 2 where the catalyst comprises nickel oxide supported on alumina. The preferred carbon content of 1 to 2.6% by weight set forth in new claims 13 and 14 is found on page 4 sixth line from the bottom of the application.

The following paragraphs correspond to the order of the paragraphs of the Office Action:

Claim Rejections - 35 U.S.C. 102

Claims 1, 2, 5, 9 and 10 were rejected as being anticipated under 35 U.S.C. 102(b) over Sadakane (EP 0745660). Inasmuch as claim 4 reciting a surface area of less than 200 m^2/g was not rejected and in view of the present amendment to claim 1, it is clear that these claims are not anticipated.

Claim Rejections - 35 U.S.C. 103

The rejection under 35 U.S.C. 103 is based on the teachings of Sadakane in view of Dufresne (5,922,638) further in view of Da Costa, the latter reference disclosing a specific surface area in the range of 150 to 500 m^2/g.

Inasmuch as the present claims require that the specific surface area is less than 150 m^2/g, the value of 150 m^2/g being the absolute minimum value in the overall range of 150 to 500 m^2/g

of Da Costa, it is respectfully submitted that Applicant's range which is lower than the lowest value of Da Costa flies in the face of the teachings of the combined references and thereby constitutes novel and unobvious subject matter. Even less obvious is a catalyst according to claim 4 wherein the specific surface is not more than 130 m^2/g.

The importance of the specific surface combined with the content of carbon in the catalyst can be deduced from the examples. There are two factors which are very important in the hydrodesulfurization of olefin-containing gasolines. The first is the activity constant of the hydrodesulfurization itself, the higher the better, the next is the selectivity which is the ratio of the hydrodesulfurization constant to the activity constant of the hydrogenation of olefins. Since olefins are desired in gasoline for their octane value, the higher the selectivity for hydrodesulfurization over the hydrogenation of olefins, the better.

Referring to Table 1, it is seen that the presence of carbon results in a higher selectivity. More important, referring to both Tables 1 and Table 2, it is seen that too much carbon i.e. over 2.8% carbon (catalyst 7, 8, 11) results in both a lower selectivity and a lower rate of hydrodesulfurization (e.g. catalyst 11) than a catalyst containing only 0.9 carbon (catalyst 10).

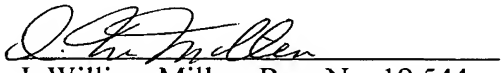
Referring now to the importance of surface area, attention is invited to Table 3, catalyst 12 has a very low specific surface of 50 and a high selectivity of 1.12 compared to catalysts having a higher specific surface, albeit the activity constant for hydrodesulfurization is a bit lower.

Referring to Table 4, it is seen that a catalyst containing 2.1% by weight of carbon and a specific surface of 130, all other properties being equal, exhibits an excellent high rate of desulfurization of 1.03 and a high selectivity of 1.20. Consequently, it is clear that a low specific surface is critical to obtaining both a sufficiently high activity constant for hydrodesulfurization and a high selectivity. The differences set forth in the tables are very significant because hydrodesulfurization is essential in order to reduce the sulfur content in gasoline while it is also very important <u>not</u> to lower the octane rating of the gasoline. Thus, even small differences results in very large improvements, considering the amounts of gasoline that are treated.

In view of the above remarks, favorable reconsideration is courteously requested. If there are any remaining issues which can be expeditiously resolved by a telephone conference, the Examiner is courteously invited to telephone Counsel at the number indicated below.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,



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